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ABSTRACT

This guide focuses on ways that professional development may be used to assist educators in transforming their schools to more futuristic structures where vocational and academic education integration flourishes. Although the guide centers on integration, information presented should be of value to anyone who plans and organizes comprehensive change in school settings. First, several of the new demands and realities associated with professional development are presented. Next, vocational and academic education integration is viewed in the context of an emerging professional development paradigm. Finally, professional development approaches that administrators, teachers, and counselors can use to facilitate the integration of vocational and academic education are described. These approaches, which are based on discussions with professional educators at school sites in 10 different states, are summarized in a list of suggestions for providing relevant professional development. The suggestions presented should be of value to anyone who is currently initiating or planning to establish integrated programs. (11 references) (YLB)

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National Center for Research in
Vocational Education

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DEVELOPMENT TO FACILITATE
VOCATIONAL AND ACADEMIC
EDUCATION INTEGRATION:
A PRACTITIONER'S GUIDE**

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A PRACTITIONER'S GUIDE**

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EXECUTIVE SUMMARY

Recognition that change is constant and that teacher preparation and development have not kept pace with what is needed in the schools has led to a realization that new preparation and development processes will be required. This is especially true in schools where vocational and academic education integration is being initiated. In these settings, teachers will need assistance so they can shift from instructing in an independent and autonomous manner to becoming participating members of the total school enterprise. They must learn to function as members of professional teams, including teams operating within and across institutions.

This guide focuses on ways that professional development may be tailored to assist educators in transforming their schools to more futuristic structures where vocational and academic education flourishes. First, several of the new demands and realities associated with professional development are presented. Next, vocational and academic education integration is viewed in the context of an emerging professional development paradigm. And third, professional development approaches that administrators, teachers, and counselors can use to facilitate the integration of vocational and academic education are described.

These approaches, which are based on discussions with professional educators at school sites in ten different states, are summarized in a list of suggestions for providing relevant professional development. The suggestions presented should be of value to anyone who is currently initiating or planning to establish integrated programs.

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OVERVIEW

Change in education is becoming more and more commonplace. And numerous changes that are occurring affect the ways schools and school personnel function (Lunenburg & Ornstein, 1991). These changes include, but are by no means limited to, educational restructuring, site-based management, integration of vocational and academic education, and Tech Prep. In fact, potential exists for more changes to be initiated in the schools over the next few years than have occurred during the last twenty years. Such changes will undoubtedly place greater demands and burdens on the school's entire professional staff including administrators, teachers, and counselors. Of these staff members, teachers are most likely to be affected by change since they have direct responsibilities for helping students to learn.

The teacher is generally recognized as a key element in the educational change process. This is primarily because teachers oversee what occurs in their classrooms and laboratories. If teachers embrace an innovation and support its implementation, the potential for success is greatly enhanced. However, as Fullan (1991) indicated, even the most promising innovation may be doomed to failure if teachers do not support its implementation.

Teacher professional development is based on the premise that teachers serve as a professional link between the educational institution—including its philosophy, mission, goals, programs, courses and content—and students, including how students learn, what they learn, and how much they learn. Because of teachers' unique roles in the education process and the potential they have to effect change in the schools, these professionals must be both supportive of and actively engaged in change.

For any change to be successful, teachers must become full partners in the change process. Thus, teachers should not only be knowledgeable about a particular change, they must also understand the ways change can improve instruction and learning. The change process also extends to each teacher's initial and continuing acceptance and support. Since teachers can be excellent facilitators of change, it is important for change "to support rather than detract from their professional roles" (Finch & McGough, 1991, p. 185). This is where relevant professional development activities can contribute to successful change,

particularly when teachers are provided with personally rewarding, realistic, and practical opportunities to engage in implementing change.

A distinct form of educational structure that is being implemented in schools across the United States focuses on collective rather than individual teacher involvement, teamwork as contrasted with individual work, and group processes instead of isolated activity. One especially significant example of such a structure is the integration of vocational and academic education. This guide focuses on ways that professional development may be employed to assist educators in transforming their schools to more futuristic structures where vocational and academic education integration flourishes. Although the guide centers on integration, information presented should be of value to anyone who plans and organizes comprehensive change in school settings. In other words, although examples presented in the guide are integration-specific, the approaches employed are generic to many settings where change occurs.

Initially, several of the new demands and realities associated with professional development are presented. Next, vocational and academic education integration is viewed within the context of an emerging professional development paradigm. And, finally, professional development approaches that administrators, teachers, and counselors can use to assist in integrating vocational and academic education are described. These approaches should be of value to anyone who is currently initiating or is planning to establish integrated programs.

PROFESSIONAL DEVELOPMENT: NEW DEMANDS AND NEW REALITIES

Traditionally, educators have been prepared as individuals with little thought given to how these professionals might function as members of professional teams and groups. Since administrators, teachers, and counselors have their personal position descriptions, "boxes" within the bureaucratic hierarchy, and informally designated territories within the school setting, the educational workplace has tended to reinforce the notion of educators functioning as individuals. Unfortunately, over the years, preparation and professional development programs have tended to reinforce the organizational status quo (Shedd & Bacharach, 1991). More recently, however, recognition that change is constant and that

professional preparation and development have not kept pace with what is needed in the schools has led to the realization among many that new demands on education professionals will require new preparation and development processes. For example, with regard to administrator preparation, Murphy and Hallinger (1987) stated that "A consensus has developed concerning the inefficacy of traditional training programs in educational administration. Few practitioners would cite their training leading to certification as school administrators as a major influence upon their practice as principals, supervisors, or district administrators" (p. xi).

Regarding teacher preparation, Edmundson (1990) indicated that the teacher education curriculum is obsolete and must be redesigned from the ground up. The author goes on to say that few teacher preparation programs give any consideration "to the teacher as an agent of change or renewal. . . . Teachers must be able and disposed to work together to overcome the isolation that often breeds distrust of and resistance to calls for change" (p. 721). These authors and others voice the need for preparation and development programs that enable professionals to function in new ways. Because of new educational structures and, consequently, teachers' new roles in the education process, they must become full partners in schooling. This partnership can be created by providing teachers with knowledge about and skills in areas such as team building, problem solving, collaborative curriculum development, student learning across the curriculum, and outcome assessment. Specifically, teachers will need assistance so they can shift from instructing in an independent and autonomous manner to becoming participating members in the total school enterprise (Schmidt, 1991). They must learn to function as members of professional teams, including teams operating within institutions and teams operating across institutions.

Thus, as schools and schooling are evolving, professional development processes and content must likewise evolve to meet the changing needs of education professionals. Educators must be prepared to work together so they can guide students through comprehensive, articulated programs where vocational and academic studies are truly integrated. Professional development of the entire school staff will be more the rule than the exception as integration and other innovative approaches are initiated in schools across the United States.

TOWARD A NEW PROFESSIONAL DEVELOPMENT PARADIGM

Most professional development programs for educators appear to focus primarily on the *individual's* development and performance. This arrangement, which has been in place for many years, parallels the traditional corporate training and development model where emphasis is placed on providing the individual with opportunities to train and to grow. As business competition became more global during the 1960s and 1970s, many companies began to realize that they were not remaining competitive. In order to regain their competitive edge or just stay in business, some corporations have shifted to new organizational structures that emphasize maintaining and improving product quality, meeting evolving customer needs, exploiting emerging markets, entering new businesses, and becoming more innovative (Stalk, Evans, & Shulman, 1992). New structures that have enabled companies to become competitive are more oriented toward a matrix organization than a hierarchical structure. These organizations focus more on bottom-up than top-down operation and emphasize employee teamwork, team decision making, and team problem solving.

Based on pressures generated by the educational reform movement (Finn & Rebarber, 1992) and a recognition that schools may have reached their maximum efficiency under the traditional model of schooling, many school districts and schools are creating new organizational structures. Although not driven by the profit motive such as is the case with many companies, these new models incorporate many concepts that are similar to those put into practice by businesses and industries. Murphy (1991) indicated that restructuring efforts to date have focused primarily on four interrelated strategies: (1) teacher empowerment, (2) school-based management, (3) teaching for understanding, and (4) redefining the teaching-learning process. These strategies, in turn, create new roles: superintendents and principals as facilitators, teachers as leaders, students as workers, and parents as partners. The new strategies and roles parallel worker role shifts in many companies. For example, many companies are providing assembly-line workers with opportunities to become team members/problem solvers/decision makers. Like their business counterparts, teachers in these new organizational structures will assume new roles as team members, team decision makers, and informal leaders within the organization. It is predicted that in future years teachers will be called upon to make more of the key decisions in the school and principals will facilitate that process.

As schools become restructured and education professionals assume new roles in these schools, professional development must also change. Drawing from comments presented by Murphy and Hallinger (1987) and our observations in the schools, it appears that professional development will assume a new character which includes

- more emphasis on school-based development programs and less emphasis on university-based programs,
- more emphasis on teachers teaching teachers,
- more emphasis on collective or team development as contrasted with individual development,
- more emphasis on continuous rather than intermittent professional development activities,
- more emphasis on informal opportunities for professional development, and
- more emphasis on teacher self-governance and decision making in meeting professional development needs.

Within this evolving professional development paradigm, consideration will need to be given to teachers' new roles in the schools as well as how to meet professional development needs that are generated by these new roles.

PERSPECTIVES FROM THE FIELD

To study teachers' roles in the integration of vocational and academic education we travelled to school sites in ten different states. Each of these school sites had been nominated as being exemplary in the integration of vocational and academic education. At each location, information was gathered about the context within which integration was taking place. Additionally, interviews were conducted with principals, other administrators, counselors, and teachers of vocational and academic subjects. By conducting interviews, we were able to identify events in the lives of education professionals where integration had been quite successful and also events which, in hindsight, called for changes in the way things were done. A detailed description of the

field study process is presented in a companion report (Schmidt, Finch, & Faulkner, 1992).

From the events, we were able to identify a number of instances where professional development occurred. These professional development "activities" were initiated by administrators, teachers, and counselors. In some cases, activities were initiated and/or organized by administrators and conducted by teachers or counselors. In other cases, professional development was planned and executed by teachers or counselors. Some professional development activities involved travel to other locations such as attending summer institutes and participating in retreats. Collectively, the activities contribute to the description of an evolving professional development paradigm. However, equally important are descriptions of creative ways that professional development can be used to facilitate the integration of vocational and academic education.

From interviews with principals, other administrators, vocational education teachers, academic education teachers, and counselors, events that focused primarily on or included professional development were noted. These events, as provided by practitioners, served as a text from which relevant professional development activities could be drawn. In this section, the perspectives on professional development of administrators, teachers, and counselors are provided. Obviously, these perspectives are not mutually exclusive. They have merely been organized into these three discussion areas to highlight each professional group's perspectives.

Administrators and Professional Development

Administrators in the schools we visited used a variety of professional development activities to facilitate the integration of vocational and academic education. One of the most common activities used was team building. Vocational and academic teacher teams often began as committees. As one vocational teacher stated,

Three years ago, the administrators formed a committee of English and vocational teachers to outline projects that students would complete cooperatively in the vocational and English classes. The projects were to be completed over all four years that students were at the school, freshman through senior years.

Administrators seemed sensitive to the need for a variety of teachers serving on committees and thus identified and selected committee members from both vocational and academic sectors of the school. When discussing the formation of a committee, one principal said,

Three or four years ago the administration at this school pulled together a group of teachers for half a day to discuss the freshman writing project to see if the assignment could be modified. When putting together the group, the administration chose one positive and one negative person from English and from the vocational curriculum.

The team-building process could take many forms. After working with teachers on integration for a period of time, one principal became dissatisfied with progress and decided to link professional development activities with the establishment of a teacher team in the school. The principal noted,

Thus, I formed a team of leaders from vocational and academic education. The team members attended the Southern Regional Education Board-Vocational Education Consortium Staff Development Conference. Following the conference, the team had a two-week work session held at the school to write applied curriculum. The charge I gave to the team was for them to come up with significant integration activities that they could implement.

Administrators also organized professional development activities for teachers at the school and across the school district. One of the most powerful ways to provide professional development was for teachers to teach teachers. As one English teacher commented,

Teachers from the entire county were invited to come to the high school to learn about applied communication. The administration asked me and another English teacher to provide the inservice program because we had been working with applied communication longer than the other English teachers in the county.

In several instances, administrators asked vocational and academic education teacher teams to provide professional development workshops for other teachers in their schools.

When administrators scheduled times that teachers could meet together, they created even more potential opportunities for teacher professional development to occur and simultaneously facilitated the integration process. With regard to teacher schedules, one

administrator described how a rather simple schedule change contributed to integration in the school:

In addition, we scheduled the academic teachers for a planning period during one of the last two periods of the day. Most all of the vocational teachers are free during the two last periods. This allowed the academic and vocational teachers to meet during a common time. The teachers do utilize this time to meet. Another outcome is that this school now has one lunch period. The teachers feel this time is just as beneficial to share information with one another.

Another way that administrators moved toward implementation of integration was through teacher empowerment. Although professional development through empowerment is not very common, some administrators appeared to recognize that opportunities must be provided for teachers to become the owners of the integration process. One school administrator said,

When the administrators first got the grant for the vocational and English teachers to work together, they tried to stay out of the implementation stage as much as possible and to make the cooperative efforts ones [that were] owned by the teachers.

We also noted that committee assignments could serve as a powerful approach to professional development, particularly during the early stages in integration when it is important for vocational and academic teachers to understand each other better. When commenting on a committee assignment made by administration, a vocational teacher expressed frustration about working as a committee member:

The five committee members were selected by the administrators to write the articulation program between the vocational courses and the English courses. Before the first meeting of the committee, I said to myself why me, thinking to myself that I didn't luck out again.

This vocational teacher eventually began to enjoy the committee work, ultimately appreciated the opportunity to work with English teachers, and learned in the process.

It was evident from our interviews that if teachers were assigned to teach subjects for which they are not prepared (i.e., principles of technology) problems could arise. With regard to a newly hired teacher, one administrator admitted that difficulties emerged from a situation when proper action was not taken:

On the surface, the scheduling of the new teacher without preparation to teach applied communications involved only two individuals, the new teacher and the previous applied communications teacher. Yet I can see that a lot of ground was lost by my not applying the leadership for a smooth transition of the applied communications course to the new teacher.

In one instance, a lack of teacher preparation to teach certain subjects contributed to a rather frustrating and complex situation. As one principal commented,

In the applied math area, there were some problems. The teacher that taught the applied math course the first year was excited about it and did an excellent job, but could not teach it the second year because of certification problems. So the next year a beginning teacher taught the applied math course. There was no time to get this person trained to teach applied math. Last year another person taught the course. She had a nervous breakdown so we had to switch teachers in mid-semester.

It was evident that the integration process demanded a new form of leadership. Administrators who were successful with integration served in facilitator roles; clearly they tried to be responsive to teachers' needs. As a vocational teacher stated,

The administrators now schedule a meeting at the beginning of the year for all English and vocational teachers. We go over the outlines for the projects for all four years. Now the projects are going much more smoothly.

Perhaps stimulated by our request to discuss events in the past where, due to hindsight, things would be changed, several administrators noted how they had learned from their experiences working with integration. In terms of providing leadership, some administrators were not fully prepared to deal with the complexities of integration. For example, one principal felt that a good job was being done with implementing integration and then found out that there were communication problems:

When I realized what was happening, I just kind of kicked myself. I thought that I was communicating because I thought I was a people person. But I couldn't go back and change history, so I didn't dwell on it. But I knew I had to fix it. This all happened in the spring. So at the start of the academic year, I called a meeting and told the faculty that we had to get moving on this integration or else the students were going to suffer. I had a speaker in that day who talked about the necessity of change and about putting things behind you, and we went forward from there.

Another principal recognized in retrospect what should have been done with integration but was not done. This person made a personal commitment to move forward with the process:

A science teacher who was trained to teach principles of technology and had been teaching this course to students in the high school, decided to resign. After this teacher resigned, the ball was dropped and the school did not move ahead with the basic skills project very much. This was primarily because I was a new and inexperienced principal and the superintendent was also new.

Reflecting back, I wish that we had started the applied courses sooner and had the principles of applied technology and applied communication courses in place right now. We need to get the principles of technology course started up again and get the teachers more involved.

One administrator spoke about what had been learned through the integration process when attempting to break down barriers that existed between teacher groups. This person commented,

If I knew then what I know now and could go back to where we began, the teachers would have moved a lot faster into interaction between the vocational center and the high schools. The natural barriers between the two teacher groups would have been eradicated and application of learned materials would have been learned sooner.

Based on these comments from the field, several suggestions for professional development are offered:

1. Use a variety of activities to build vocational and academic teacher teams. Examples include forming committees, setting up teamwork sessions, and sending groups to conferences and workshops.
2. Utilize the "teachers teaching teachers" concept. Provide teachers who have developed integration-related skills with opportunities to share their expertise with other teachers.
3. Employ teacher professional development teams whenever practicable. Using vocational and academic teacher teams to conduct professional development sessions and workshops exemplifies the integration concept.

4. Schedule times when vocational and academic teachers can meet and work together. Change cannot take place unless teachers have quality time to meet and plan joint teaching activities.
5. Empower teachers. Provide opportunities for groups of vocational and academic teachers to make significant curriculum and instruction-related decisions.
6. Utilize the committee as a form of professional development where teachers have opportunities to meet other teachers and discover their different perspectives.
7. Ensure that teachers are fully qualified to teach subjects that they are assigned to teach. The subtle aspects of integration are often not learned by reading a book. Likewise, many courses where content is integrated demand that teachers teach students in different ways.
8. Facilitate rather than push the shift toward integration. To paraphrase an adage, "you can lead teachers to school, but you cannot make them integrate." Teachers must ultimately have the need and desire to integrate vocational and academic education.
9. Build strong communication links with and among teachers. Keep teachers apprised of progress toward integration. Likewise, provide time for teachers to share their successes with other teachers and organize opportunities for vocational and academic teachers to get to know one another both professionally and socially.
10. When organizing for integration, work closely with all teachers. No teacher or teacher group wants to feel left out of the process.

Teachers and Professional Development

During our interviews, persons described a number of teacher outcomes related to integration. And many of these outcomes could likewise be linked to professional development. This section presents some of the ways that professional development can contribute to teachers recognizing the value of integration, collaborating with teachers, growing professionally, and teaming with others to teach.

Although the workshop is a professional development mainstay, it is sometimes difficult to identify what effect workshops have on teachers. When being interviewed, an academic teacher commented about how a workshop contributed to a recognition of the value of integration:

Once we teachers finally got our differences out of the way and started working in a positive direction, then administrators sent some of us to workshops related to applied math. After attending the workshops, other math teachers and I spent several days doing the labs ourselves so we could understand what the students would be doing. When it got to that point, I was getting excited and ready to teach the applied courses.

Having teachers collaborate with other teachers can be considered as a more informal professional development activity. Teachers we interviewed seemed to feel very positive about their collaboration with other teachers. A vocational teacher spoke to the positive feeling he had when collaborating with a jobs teacher and a language arts teacher:

I felt good about this activity because this language arts teacher was a tough nut to crack, but the jobs teacher and I, along with the students, convinced the language arts teacher that the vocational students would benefit from using the collaborative model.

Some teachers learned to appreciate collaboration only after they had been involved in it for a while. An English teacher gained such an appreciation after working with business teachers. This person's comments also show how teacher collaboration can have a positive effect on students:

I think the business teachers and I are learning as time goes on and we are going to have to help each other out. Each teacher is learning to adjust to other teachers' writing rules such as punctuation, and the students are learning that when they get into business they are going to modify their rules to suit various employers' needs.

An academic teacher learned from experience that successful collaboration places certain demands on the collaborators:

I think revising the career assignment was very successful. It taught me that if there is some value in articulation, the teachers have to sit down together and articulate and work through their program assignments.

Evidently, professional development activities that were reported during our interviews had some positive impact on teachers. Comments made by teachers and

administrators supported the notion that professional development can result in teacher growth. Two different vocational teachers indicated that attending workshops resulted in their personal growth:

In terms of the applied math materials, at first I had my doubts; but after I went to a workshop, I was turned around and now feel good about the program.

As a result of the workshops, I was then able to use the techniques I learned in my electronics class and make my speech and math more basic.

Contrary to popular opinion, teacher inservice education days can also contribute to professional growth. As an English teacher indicated,

I felt good about the inservice day. The other English teacher and I probably talked for about five hours about applied communication and the integration of academic and vocational education. Before I started teaching applied communication three years ago, I did not know any of the vocational teachers. Now, I know all the vocational teachers and have worked with most of them in some capacity in developing curriculum for my applied communications classes. I am so impressed with what the vocational teachers do in their classes.

In one school, inservice education was held each Tuesday. A principal described this activity and its value in some detail:

This school has school-based staff development. Each Tuesday, the teachers use their planning periods for staff development. Different teachers provide information to others about what they are doing in their classes that is particularly effective. One of the general math teachers who has really resisted the change to integration is now one of the strongest proponents for it. He has actually developed two full books of integrated activities and has shared them with other teachers through the Tuesday staff development sessions.

Perhaps the highest level of involvement teachers can have in integration is when vocational and academic teachers team teach. Team teaching is thus considered as another informal professional development activity. Vocational and academic teachers we spoke with were quite pleased about their team teaching experiences. Teachers from several schools praised the approach and its impact on them:

I [vocational teacher] want to spend more time working with the math teachers. I will work with integrating activities more. I feel good about what is going on in integration this year. It is good to work as a team.

It takes a lot of preparation to team teach, but its a lot more fun to have two people working together. I [academic teacher] love the way we [academic teacher and mechanics teacher] are teaching; it is really an easier way to help the students.

We need to impress on the academic community that team teaching is a viable way for students to learn language arts skills. I [academic teacher] have not followed up on these students in terms of how much they had learned; however, the metals teacher is enthusiastic about the program. I feel that the team teaching approach is the best and only way.

An academic teacher described a class that was team taught in collaboration with a vocational teacher:

The vocational teacher introduced the topic, and I did the follow-up. I felt this was great. . . I feel the students' skills had improved after I reviewed calculating interest, and I feel this was a successful event for the students.

And, finally, a physics teacher described a personal transformation to becoming a more integrated teacher:

Through the help of the mechanics teacher who team taught principles of technology with me, I was able to change my teaching style so that I emphasized the hands-on application of science and math first rather than the concepts and principles I normally emphasized first with my college-bound students. I have found that many students who cannot handle the math and science of physics as it is typically taught do very well when the material is presented in a hands-on, application-first approach. As a result of what I learned from teaching principles of technology and through the help of the mechanics teacher, I now teach a lot of things differently in my college-bound physics class as well.

Based on these comments from the field, five suggestions are presented:

1. Provide teachers with workshops that contribute to their understanding of and competence in the integration of vocational and academic instruction. Workshops are often a small investment to make as compared with the professional growth and attitude changes that can occur.
2. Encourage vocational and academic teachers to collaborate. By sharing information, materials, equipment, and by collaborating on curriculum and instructional development, teachers can grow in their understanding of and appreciation for integration.

3. Utilize inservice education days to bring vocational and academic teachers together so they can work collaboratively and get to know what other teachers have done to integrate instruction.
4. Move toward school-based staff development where teachers meet on a regular basis such as once per week and share ideas about what has been effective for them as they integrate vocational and academic education.
5. Support teachers by providing opportunities for them to team teach. These opportunities should include making joint planning time available to teacher teams.

Counselors and Professional Development

Although just ten counselors were interviewed in the school sites we visited, discussions with these persons revealed several subtle and informal professional development activities. Some of these activities apply to counselors while others apply to vocational and academic teachers. A basic contribution counselors can make to professional development of teachers as well as themselves is through active involvement in the integration process. We noted that several of the counselors interviewed could not recall events in the past that had involved them with vocational and/or academic teachers in integration. This is indeed unfortunate since counselors can bring a wealth of knowledge and expertise to the integration process.

When counselors participate in meetings, workshops, and other activities attended by teachers, they show that they are full members of the integration team. Additionally, such participation can result in personal professional growth and provide counselors with opportunities to share with teachers their knowledge as well as their perspectives on integration. As one counselor who served on a steering committee to restructure the curriculum in a school stated,

I, personally, knew that the students needed more emphasis on knowledge of systems and less emphasis on specific skills. The way technology is changing, the majority of our students need further technical training when they graduate anyway. The majority of teachers as well as I, myself, knew that a change was needed. For example, all students needed computer skills.

A counselor at a different school lamented the fact that involvement in integration had not taken place sooner:

Now, it bothers me that I did not attend that [integration] workshop two years ago with the teachers when they initially started learning about integration. I feel like I am behind and I need to get caught up. If I had it to do over again, I would have attended the workshop. I have talked to my principal about this and he agrees that I should have attended the workshop.

One professional development activity specifically designed for counselors involved counselors from eight feeder high schools being invited to spend a day visiting a vocational center. This type of activity seems to be of greatest value early in the integration process when teachers and counselors are getting to know each other better. A welding teacher discussed with us what happened when counselors visited the welding laboratory:

I took the guidance counselors into my welding laboratory and physically showed them how to weld. I let some of them try to weld. Most of the counselors seemed to enjoy it. I was excited to have the opportunity to influence the counselors.

Several of the counselors we interviewed played important scheduling-related roles in the integration process. A counselor at one high school was responsible for scheduling all student field trips to business and industry. As this person indicated,

It is part of my job to schedule all field trips for the school. My role is a support role for the instructors. Since I am designated as the business contact person for the school and had visited a plastics manufacturing plant a couple of years ago, I knew this would be a good field trip and would be applicable for the students.

In this instance, the counselor could develop professionally through various contacts with business and industry and also serve as a valuable resource for teachers who used field trips to meet certain objectives.

Counselors were also engaged in class scheduling activities. In this capacity, the counselor could serve as both expert and critic, roles that benefit both teachers and students. In one school where a group of students studying auto mechanics were together for both their vocational and academic classes, the counselor was quick to point out that,

for example, all of the auto mechanics students are together in their academic classes and sometimes they tend to socialize instead of learning in their academic classes.

The counselor noted that this was one of the major problems associated with organizing the school into clusters of occupations. Perceptions of this type can help teachers learn why they are encountering difficulties teaching students in their classes and may also lead to constructive scheduling changes.

One counselor was actively involved with English teachers in planning for and team teaching a life skills unit for senior students. This person worked with the unit from conceptualization to serving as a resource person and team teacher. Such involvement by counselors provides teachers with new knowledge about the world of work and what their students need to compete in the job market.

Another counselor involved vocational and academic teacher teams in a high school parent/teacher conference day. Although the task entailed much planning and teachers needed to be oriented to their roles in conducting the conferences, the activity was a huge success. Not only did parents and students benefit, but teachers grew professionally as they worked with other teachers and interacted with parents. The counselor described one aspect of the parent/teacher conference day as follows:

The day of the parent/teacher conferences when I saw academic and vocational teachers working together discussing with parents the career plans related to vocational education and graduation and attendance policies, I just thought that was one of the highlights of the activity.

Based on these comments from the field, the following five suggestions are provided:

1. Include counselors as full members of the integration team. Involve them in meetings, workshops, and other activities attended by teachers.
2. Involve counselors with integration activities from the very beginning. Do not wait until others are engaged in integration activities.
3. Keep counselors abreast of the latest developments in vocational and academic teaching areas. Provide counselors with opportunities to visit classrooms and laboratories and listen to and talk to vocational and academic teachers.
4. Give counselors specific responsibilities and roles in the integration process. This can range from student scheduling and organizing field trips to course planning and

team teaching. Counselors need to be associated with integration on a day-to-day basis.

5. Provide opportunities for counselors to employ their professional skills in creative ways. These opportunities may take the form of instituting large-scale parent/teacher conferences and conducting professional development workshops for teachers.

DISCUSSION

As schools across the United States become restructured, the professional development of teachers in these schools must also be restructured. The principals, administrators, counselors, and vocational and academic teachers we interviewed discussed a wide variety of creative professional development activities. Most of these activities are designed to meet educators' needs as they integrate vocational and academic education.

The suggestions included in this guide serve as a starting point for organizing and initiating professional development in integrated settings. Although some of these suggestions are not entirely new, the contexts within which they are applied may be quite different from traditional school settings. It is anticipated that as more experience is gained with the integration of vocational and academic education, other suggestions will be identified, documented, and added to the current list. In this manner, a clearer picture of a new professional development paradigm will emerge; and, at the same time, the link between integration and professional development will be better understood.

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